



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, ILLINOIS 60604

SEP 09 2019

DATE:

SUBJECT: CLEAN AIR ACT INSPECTION REPORT
Continental Aluminum, New Hudson, Michigan

FROM: Marie St. Peter, Environmental Engineer
AECAB (MN/OH)

THRU: Brian Dickens, Section Chief
AECAB (MN/OH)

TO: File

BASIC INFORMATION

Facility Name: Continental Aluminum

Facility Location: 29201 Milford Road, New Hudson, Michigan

Date of Inspection: July 10, 2019

EPA Inspector(s):

1. Marie St. Peter, Environmental Engineer
2. Sarah Clark, Environmental Engineer

Other Attendees

1. Mark Buchner, President, Continental Aluminum
2. Courtney Boc, EHS Manager, Continental Aluminum
3. Iranna Konanahalli, Senior Environmental Engineer, Michigan Department of Environment, Great Lakes, and Energy (EGLE)

Contact Email Address: cboc@contalum.com

Purpose of Inspection: 40 CFR 63, Subpart RRR; Permit to Install

Facility Type: Secondary Aluminum

Regulations Central to Inspection: MACT RRR

Arrival Time: 9:45 AM

Departure Time: 2:00 PM

Inspection Type:

- ☒ Unannounced Inspection
- ☐ Announced Inspection

OPENING CONFERENCE

- ☒ Credentials Presented
- ☒ CBI warning to facility provided

The following information was obtained verbally from Ms. Bloc or Mr. Buchner unless otherwise noted.

Process Description:

Continental Aluminum (the Facility) is a secondary aluminum smelter that operates three furnaces. One of the furnaces is a rotary furnace which operates as a batch process. The other two are reverberatory furnaces which operate as continuous processes. The Facility sources its aluminum from industrial scrap yards. After receipt, the scrap goes through a melt test, which determines melt loss and the chemistry of the aluminum. From here, scrap is pre-treated based on its size. Large pieces of scrap go through a shredder, which removes unwanted pieces of plastic and other impurities to the process. Smaller pieces, which are called turnings, are sent through a chip dryer. The chip dryer removes water, oil, and iron through centrifugal force and a magnet.

After pre-treatment, the scrap is either loaded onto a shaker table, which transfers the scrap into a reverberatory furnace, or is loaded directly into the rotary furnace. In addition to scrap, the rotary furnace also processes dross. At least one of two types of flux material used by the Facility is added to each furnace. If the furnace in use is the rotary furnace, the flux is added directly into the furnace. If the furnace is instead one of the reverberatory furnaces, the flux is added into the sidewall or shaker table. If the Facility is making deoxidized aluminum, it is casted into cones, shots, and squares. This product is then sent to steel mills. If the Facility is making an alloy, which is created by adding various different materials to get a specific desired chemistry, the alloy is casted into ingots or sows. While various customers purchase the alloys created, it is primarily used to create car parts.

Staff Interview: EPA was informed that during its inspection, the Facility was performing the third three-hour run of a scheduled stack test for Reverb Furnace 2 to quantify emissions of particulate matter, dioxin/furans, and acids. This test is intended to establish limits on Reverb Furnace 2's feed rate, flux injection rate, minimum lime injection rate and maximum baghouse inlet temperature. This stack test was occurring over two days, during which time the Facility was making various products. The scrap being used throughout the two days was a mix of extrusions, turnings, brazings and twitch; which the Facility believed provided a fair representation of its operations.

The stack test was being performed because Reverb Furnace 2 was brought back online for trial runs in March 2019, after an extended period of being idled. The Rotary Furnace and Reverb Furnace 1 have been running since 2013. The most recent stack tests these furnaces completed was in 2013.

Each furnace has its own baghouse. The Facility uses lime, which is injected prior to the baghouse cells, to reduce its acid emissions; its use is manually recorded and then entered into a SQL database. In addition to lime, the Facility injects carbon into the baghouses to treat odors; though it was not injecting carbon during the current stack test. The lime injection is separate from the carbon injection for the Rotary Furnace and Reverb Furnace 1 baghouses; the lime and carbon use the same injector for the Reverb Furnace 2 baghouse. The Facility monitors each baghouse's inlet temperature, pressure differential and opacity. There is an alarm system in place for the baghouse temperatures. For the Reverb Furnace 2 baghouse, its opacity is monitored using a continuous opacity monitoring system and bag leak detection system. The Reverb Furnace 1 and the Rotary Furnace baghouses are equipped with bag leak detection systems, and the staff monitors cameras directed at their stacks; if the Facility staff observe emissions, the staff performs Method 9 tests. All three baghouses were installed recently, which replaced older baghouse systems. During yesterday's portion of the test, it was estimated that a three-hour sample used to quantify its hydrochloric acid emissions was at 50% of its hourly emissions limit.

TOUR INFORMATION

EPA toured the facility: Yes

Data Collected and Observations: EPA toured the facility and spoke with the stack testing company, during which time they discussed the preliminary results of the hydrochloric acid emissions collected on the first day of testing.

Photos and/or Videos: were taken during the inspection. Photos were claimed as confidential business information.

Field Measurements: were not taken during this inspection.

RECORDS REVIEW

EPA did not review any records on site.

CLOSING CONFERENCE

Requested documents:

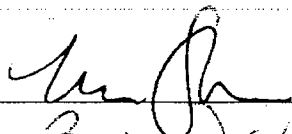
EPA informed plant personnel that they would follow up with an email requesting the following:

- 2019 stack test report
- 2013 stack test reports
- Breakdown of feed rates, rate of flux addition during 2019 and 2013 stack tests

- June 2019 hourly production, including type of feed (i.e., extrusions, turnings, dross, etc.), feed/charge rate, and flux added.
- Spreadsheet used for NESHAP RRR.

SIGNATURES

Report Author:



Date:

9/9/2019

Section Chief:



Date:

9/9/2019

Facility Name: Continental Aluminum
Facility Location: 29021 Milford Rd, New Hudson, MI
Date of Inspection: July 10, 2019

APPENDICES AND ATTACHMENTS

1. Appendix A – Photo Log
2. Attachment 1: CD-R Containing Photos*

*CBI Attachment

Facility Name: Continental Aluminum

Facility Location: 29201 Milford Road, New Hudson, Michigan

Date of Inspection: July 10, 2019

APPENDIX A: DIGITAL IMAGE LOG

1. Inspector Name: Sarah Clark	2. Archival Record Location: CD-R labeled as "Continental Aluminum, New Hudson, MI Inspection Photos, July 10, 2019"
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Image Number	File Name	Date and Time (incl. time zone and DST)	Latitude and Longitude	Description of Image
1	P7100043.JPG	2019:07:10 11:56:31		Reverb Furnace 2
2	P7100044.JPG	2019:07:10 12:02:24		Reverb Furnace 1
3	P7100045.JPG	2019:07:10 12:02:31		Reverb Furnace 1
4	P7100046.JPG	2019:07:10 12:03:25		Rotary Furnace (open)
5	P7100047.JPG	2019:07:10 12:05:14		Rotary Furnace (closed)
6	P7100048.JPG	2019:07:10 12:06:08		Rotary Furnace Label
7	P7100049.JPG	2019:07:10 12:07:09		Reverb Furnace 1 (hood)
8	P7100050.JPG	2019:07:10 12:07:13		Reverb Furnace 1 ducting
9	P7100051.JPG	2019:07:10 12:09:14		Scale
10	P7100052.JPG	2019:07:10 12:09:36		Reverb Furnace 2 - Charging
11	P7100053.JPG	2019:07:10 12:09:56		Reverb Furnace 2 - Charging
12	P7100055.JPG	2019:07:10 12:10:26		Reverb Furnace 2 - Charging
13	P7100056.JPG	2019:07:10 12:13:35		Lime Feeder for Reverb Furnace 2
14	P7100057.JPG	2019:07:10 12:14:52		Lime Feeder for Rotary Furnace
15	P7100058.JPG	2019:07:10 12:15:00		Lime Feeder for Reverb Furnace 1
16	P7100059.JPG	2019:07:10 12:26:18		Reverb Furnace 1 - Furnace Label
17	P7100060.JPG	2019:07:10 12:27:09		Reverb Furnace 2 Furnace Label